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10/587,274	07/25/2006	Andreas Bode	2003P18668WOUS	4911
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EXAMINER KIM, KYUNG J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/587,274

Applicant(s)

BODE ET AL.

Examiner

KYUNG J. KIM

Art Unit

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 8-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 July 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/ISD)
Paper No(s)/Mail Date 09/01/2009, 08/20/2009, 07/25/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

This communication is a first office action non-final rejection on the merits.

Claims 1-7, as originally filed, are cancelled and claims 8-18 as amended, are currently pending and have been considered below.

Specification

1. The disclosure is objected to because of the following informalities: in paragraph [0011], line 2, "depending of the current" should be -- depending on the current --. In paragraph [0031], line 3, "since it was stored last stored" should be -- since it was last stored --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 11 recites the limitation "the second compression method" in the third line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8, 10, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Anuzis et al. (US 2002/0040278).

a. Regarding claim 8, Anuzis et al. discloses:

determining the current operating state of the plant (Para. [0012]-[0014], [0081]-[0083]);

applying a corresponding compression method for the current operating state to a set of process signals, wherein said applying the compression method comprises;

acquiring process signals at definable time intervals (Para. [0081]-[0083]);

storing the process signals first in a header buffer (buffer (14, 16)) at an instant other the instant corresponding to the current operating state (Para. [0083]-[0085]);

examining the process signals to ascertain whether a process signal has remained within an amplitude band since it was last stored and how long ago it was last stored, wherein the examining step involves selecting the size of the amplitude to correspond to the current operating state of the plant (Para. [0083]-[0087]); and

storing the process signal as a part of a compressed signal set if it was last stored longer ago than a predefined time interval (Para. [0083]-[0087]).

- b. Regarding claim 10, Anuzis et al. discloses:

the acquiring step further comprises acquiring the process signals simultaneously so that the set of process signals corresponds to a particular instant (Para. [0081]-[0083]).

- c. Regarding claim 11, Anuzis et al. as modified by Ong discloses all the limitations of claim 8 and further discloses:

after the step of storing the set of compressed signals, determining that the operating state of the plant has changed to a second state, and applying the second compression method corresponding to the second operating state to a set of process signals, wherein the second compression method examines the process signals in accordance with an amplitude band corresponding to the second operating state of the plant (Para. [0083]-[0087]).

- d. Regarding claim 12, Anuzis et al. discloses:

the acquiring step further comprising selecting time intervals for acquiring process signals according to the current operating state of the plant, and acquiring process signals at definable time intervals (Para. [0083]-[0085]).

- e. Regarding claim 14, Anuzis et al. discloses:

the compression method further comprises monitoring the process signals for violation of a limit value (Para. [0003], [0021] and [0092]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. (US 2002/0040278) in view of Ong (US 6,177,898).

a. Regarding claim 9, Anuzis et al. discloses:

acquiring process signals at definable time intervals (Para. [0081]-[0083]);

storing the process signals first in a header buffer (14, 16) at an instant other the instant corresponding to the current operating state (Para. [0083]-[0085]);

examining the process signals to ascertain whether a process signal has left a further amplitude band since it was last stored and how long ago it was last stored, wherein the examining step involves selecting the size of the further amplitude band to correspond to the current operating state of the plant (Para. [0083]-[0087]);

However, Anuzis et al. does not expressly disclose:

storing the process signal as a part of a compressed signal set matched to the current operating state only after it has left the further amplitude band.

Ong discloses:

storing the process signal as a part of a compressed signal set matched to the current operating state only after it has left the further amplitude band (Col. 3, lines 24-67, col. 5, lines 46-67).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the amplitude change of Ong to the health monitoring of Anuzis et al. in order to reduce the total number of data messages required to accurately recreate the analog waveform (Col. 4, lines 8-19).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. in view of Taniguchi et al. (US 5,038,287).

a. Regarding claim 13, Anuzis et al. discloses all the limitations of claim 8, and further discloses:

applying the compression method step further comprises after the step of acquiring process signals at definable time intervals, storing process signals whose current values are in the region of a zero point with the value zero.

However, Anuzis et al. does not expressly disclose:

applying the compression method step further comprises after the step of acquiring process signals at definable time intervals, storing process signals whose current values are in the region of a zero point with the value zero.

Taniguchi et al. discloses:

applying the compression method step further comprises after the step of acquiring process signals at definable time intervals, storing process signals

whose current values are in the region of a zero point with the value zero (Col. 8, lines 43-64).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the resetting timer of Taniguchi et al. to the health monitoring of Anuzis et al. in order to control the engine regardless of variations in the signal (Col. 3, lines 58-68, col. 4, lines 1-2).

9. Claims 11, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. in view of Ozono (US 5,203,160) in further view of Takahashi et al. (US 6,243,139).

a. Regarding claim 15, Anuzis et al. discloses all the limitations of claim 8, but does not expressly disclose:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for a plant operating state in which the process signals to be stored have minimal change.

Takahashi et al. discloses:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for a plant operating state in which the process signals to be stored have minimal

change (Col. 11, lines 19-47 and Fig. 14, where higher compression rate results in lower quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

b. Regarding claim 16, Anuzis et al. discloses all the limitations of claim 8, but does not expressly disclose:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for a plant operating state in which the process signals to be stored have marked change.

Takahashi et al. discloses:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for a plant operating state in which the process signals to be stored have marked change (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

c. Regarding claim 17, Anuzis et al. discloses all the limitations of claim 8, but does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start-up phase with markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less-marked change and more constant signals than in the start-up phase, wherein the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase.

Ozono discloses:

the plant comprises a turbine plant having at least two operating states, a start-up phase with markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less-marked change and more constant signals than in the start-up phase (Col. 2,

lines 27-68, col. 3, lines 1-27, col. 7, lines 47-68, col. 8, lines 1-17, col. 11, lines 35-68, col. 12, lines 1-3 and Fig. 4).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the start-up phase of Ozono to the health monitoring of Anuzis et al. in order to allow for the plant to be easily started up under different conditions (Col. 2, lines 27-38).

However, Anuzis et al. as modified by Ozono does not expressly disclose:

the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase.

Takahashi et al. discloses:

the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

d. Regarding claim 18, Anuzis et al. discloses all the limitations of claim 8, but does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start- up phase with generally markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less marked change and more constant signals than in the start-up phase, wherein the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying a corresponding compression method for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase.

Ozono discloses:

the plant comprises a turbine plant having at least two operating states, a start- up phase with generally markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less marked change and more constant signals than in the start-up phase

(Col. 2, lines 27-68, col. 3, lines 1-27, col. 7, lines 47-68, col. 8, lines 1-17, col. 11, lines 35-68, col. 12, lines 1-3 and Fig. 4).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the start-up phase of Ozono to the health monitoring of Anuzis et al. in order to allow for the plant to be easily started up under different conditions (Col. 2, lines 27-38).

However, Anuzis et al. as modified by Ozono does not expressly disclose:

the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying a corresponding compression method for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase.

Takahashi et al. discloses:

the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying a corresponding compression method for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns

compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see attached PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KYUNG J. KIM whose telephone number is (571)270-5742. The examiner can normally be reached on Monday - Friday 9:30am to 5pm with alternative Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571)272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KYUNG J KIM/
Examiner, Art Unit 3664
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664